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Reminiscences

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SUMMER RESEARCH IN DALLAS

Around this time, Dr. Erdős moved his laboratory to Southwestern Medical School in Dallas, Texas. Even while I was still in Sarajevo, I was invited to participate at a symposium on Angiotensins and Related Peptides in Houston and was pleased to visit the professor in his new surroundings.

Later I spent my summer holidays - a period of 2-3 months each year - in Dallas, where I worked again in Dr. Erdős' laboratory. Since I was unable to take my family, I usually took quarters in the students' dormitory, known as the Residence Hall. This building was just across from the emergency clinic of Parkland Memorial Hospital where President John F. Kennedy died. Part of the Residence Hall was designated specifically for male medical residents of the Parkland Memorial Hospital; the remainder housed female hospital staff.

I learned a lot during my summer sojourns at Southwestern Medical School. It was a unique opportunity for me to learn new techniques, and to do research that I could not possibly accomplish in Tuzla during the school year. The fact that I could find such a position for the summer points up an interesting difference between our systems of medical education. For one thing, the professors in America work in their labs year round with only infrequent holidays. We in Yugoslavia have at least two months of summer holidays, in addition to another 15 days of winter holidays. In America if a professor takes one week off, it is considered quite a long holiday indeed.

Friends and activities. For my summer studies, I usually worked in the lab ten hours a day on week days and sometimes a couple of hours on Saturdays. Other members of the research team often kept the same hours. It did not seem like work at all, since we were all working together and discovering new things.

But my life in Dallas was not all work and no play. Sometimes on weekends, I would accompany Professor Erdős on visits to private art galleries or art auctions. The Dallas - Fort Worth area has many galleries, both large and small, and the professor seemed to know them all. We also attended concerts together, and it was in Dallas that I saw a performance of the famous musical, "Evita". We also joined in the celebrations of other cultures. Every July 14th (Bastille Day) l' Alliance Francais in Dallas is celebrated with parties, prizes, and a raffle. On one such occasion I won the raf-

file for a toy computer called a "Speak&Spell", a gadget made by Texas Instruments. "Speak&Spell" became very popular, particularly after it was promoted in the film, "E.T.". This attractive toy eventually found its way to all parts of the world, but my two young sons and dozen of other children in Tuzla were among the first to enjoy it. During my summer visits to Dallas I finished several research projects and published the results. In addition, my research plans drew upon the constant dialog and exchange of ideas with other visiting and resident researchers at Southwestern Medical School. Because of the fine reputation of Dr. Erdős' laboratory and the fact that many European universities allowed their scholars considerable freedom in the summer months, there were often scientists from all over the world sharing lab space and projects. I met a lot of new colleagues, including a young pharmacologist from London, Dr. Tom Hanachoe, with whom I established a firm and lasting friendship.

Another frequent visitor was Dr. Yehuda Levin from Israel, whom I remembered from our Oklahoma days. Like me, he continued to visit after the laboratory had moved to Dallas. One summer Yehuda and I both stayed in the residents' quarters of the Residence Hall. A part of the first floor in this building was a restricted area - it provided lodging for the nuns who were on duty in the hospital. No men were allowed there. Once Yehuda returned late from a theater performance one Sunday night only to find the main entrance locked. He managed somehow to enter the building by a side door, but this route led him directly through the nuns' quarters. The next day brought an investigation by the top hospital administrators. Someone had reported a man in the nuns' residence hall. They searched and inquired, but they could not imagine how a man could enter that tightly secured area, how long he stayed, or what his purpose could be. The flap quickly died down, and Yehuda was neither identified nor incriminated. Coincidentally, the residents' quarters were soon moved to another building. We never knew the whole story, but I made the acquaintance with a young nun that summer, who I suspect to open the side door. I teased Yehuda frequently about this, but being the perfect gentleman, he never admitted that she was involved in any way.

Another summer I stayed at the home of Professor Alice Johnson. It was a large, ranch style house made of stone, typically Texan, with a large swimming pool and a broad grass - covered yard suitable for badminton, soccer and other sports. She frequently entertained people from the medical school at informal parties where it was usual for the guests to help with the cooking, often offering specialities from their own countries for all to enjoy. On one occasion, I planned to make one of my favorite Yugoslav recipes. I decided that chicken paprikash, a kind of chicken stew with lots

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of spicy paprika, would easily serve about thirty people. I had a very good recipe from Sombor, and I had prepared it several times before. I had requested noodles to go with the paprikash, but Dr. Johnson arrived home from the store with packaged noodles. That just would not do at all! I weighed the possibilities, then decided to make the noodles myself. I had never done this before, but I remembered that as a child, I had seen my mother and sisters preparing noodles. I called for a large bowl, some flour and other ingredients. These were quickly provided and I began to prepare a large quantity of paste dough. I then recruited my Japanese colleague to roll it out and cut it into noodles. He was up to the job and managed to turn out great quantities to thick, broad noodles quite similar to those found in my own country - they could have passed for those served in the chardas along the Danube. It took him nearly an hour, but each noodle was rolled to precisely the right thickness and cut to precisely the right length.

Meanwhile, the guests became hungry and quite restless and began to patrol the kitchen in search of a crumb or two. By the time I had cooked and strained the noodles, I had acquired quite an audience. Several women in the group watched in fascination as I poured oil onto the home-made noodles to keep them from sticking together. Even though these ladies were, for the most part, outstanding scientists, they did not excel in cooking, at least not by European standards. I played the role of the great chef, explaining my techniques as I went along. By the time the famished crowd sat down to eat, they were particularly complimentary, and my chicken paprikash with noodles was highly praised for years to come. I still treasure some of the photos taken on this occasion of my debut as a Dallas chef.

Among many friends I met in Dallas in the summers, I found a fellow countryman, Dr. Agneza Horvath. She worked in the laboratory next to mine and we quickly struck up an acquaintance. Agnes introduced me to yet another Yugoslav, a Mr. Ante Pavelić², a true Texas multimillionaire. He once took us for lunch at an exclusive club, Mansions, and he generously invited us to his home in the neighbouring city of Forth Worth where he kept an extensive collection of art. "The paintings in this house are probably worth more than all of our Medical School in Tuzla", I thought to myself.

Some new discoveries. On one of my summer laboratory sojourns I studied the activity of ACE and rennin in the retina, a highly vascularized tissue. As it turned out, the enzymes were far more active in the retina, especially retinal microcapillaries, than in plasma. I collaborated on this project with another American scientist in the lab, Dr. Carol Wilson. The cooperation of the forensic medicine staff and the local morgue made it possible for us to study ACE in human eye tissue, since many tissues would be discarded during routine autopsy. There was no shortage of material due to the large number of accidents and murders in Dallas, particularly on weekends. It really lived up to its reputation as an old frontier town.

Dr. Andres Goth was the Chairman of Pharmacology. I remember

him as a charming, old - style gentleman who had a wealth of stories to tell of his youth in a wine-making family in Hungary and of his medical studies in Chile. He enjoyed playing the piano and was particularly fond of Schumann and Bach. Many of our social gatherings featured Professor Goth was above all, an excellent teacher. He designed and wrote a very manageable textbook of pharmacology for medical students. He gave me a copy of his book inscribed with a nice dedication, but this book, along with other personal property, was lost during the civil war in Bosnia. Every day around four o'clock Dr. Goth would visit each of the laboratories of his department. When he reached my lab, he would often sit down to talk about the most recent results. He was especially interested in experiments where I used a bioassay to determine enzyme activities. These bioassays involved measuring changes in the blood pressure of an anesthetized rat, or the contraction of an isolated rat uterus or colon, or a strip of guinea pig ileum. It was tedious work, and the newer biochemical and radioimmunoassays are far superior. Sometimes I accompanied professors Goth and Erdős to lunch. We were generally joined by Professor Park Shore, who was a long time friend of Dr. Goth's. This group was very congenial, and I always learned something from my conversations with them. I recall, in particular, a discussion about a situation that stimulated me to think of pharmacology in a practical sense. It seems that a city sheriff called Dr. Goth with a report that several men had taken hostages in a downtown building. Negotiations had failed, and there seemed to be no way to release the hostages. The whole city was highly disturbed because this event was presented live on local television. The sheriff called Dr. Goth to see if he could suggest some potent pharmacological agent to disable the abductors. Unfortunately, Dr. Goth could offer no such help. There was nothing safe for human use that could be used in this situation.

Experience gained. My research were immensely helpful to my career. I not only learned in the laboratory where I worked, but I also managed to visit other laboratories within the United States on the way back to Yugoslavia. I visited many friends - scientists in San Antonio, Bethesda, New York and Memphis - where I gave seminars and discussed my research with similarly interested people. Only once did I return directly to Yugoslavia without my usual visits around the country. One summer it was extremely hot, and the temperature did not drop below 100 degrees Fahrenheit for an entire month. Unused to such heat, I had inadequate fluid intake and developed a very painful kidney stone. I was hospitalised for three days in Parkland Memorial Hospital. It was not a pleasant experience, but it enlightened me as to a patient's perspective. Southwestern Medical School in Dallas provided a superb atmosphere for research. Excellent physical facilities and an interactive research climate are vital to the success of any research program, and Southwest is famous for both. In such a stimulating milieu, I could not fail to improve my skills. Dr. Erdős once remarked when he saw that I set up three separate experiments to do simultaneously that I must have a "hunger for exper-

imentation". I certainly had that hunger, and it was fed by my yearly visits to his laboratory.

A tragedy. Not all was completely happy during these years. Although I enjoyed personal and professional success, others were less fortunate. Dr. Dobrivoje Marinković was also a member of Dr. Erdős's research team when I first visited in Oklahoma City, and when I visited Dallas, he had become an Assistant Professor in Dr. Goth's Department of Pharmacology. I continued to collaborate with Dobrivoje, and I published a joint paper with him and his wife. He was an excellent protein chemist, but his penchant for criticizing others made him few friends. He had begun his research career studying hemoglobin at Vinča, Yugoslavia, and then trained further in the laboratory of the famous Perutz, a British scientist. About Yugoslavia, he told me, "I do not like the system there. It is a system where everything functions on the principle You give me and I will give you". The situation was certainly different in the United States, but Marinković remained unhappy even in the stimulating environment of Southwest. For one thing, there were major changes within the Pharmacology department. Dr. Goth retired, and the new chairman set out to redesign the department. He brought in a large group of researchers and new faculty members, all of which signaled a sea change in the direction of departmental research. Layoffs of several long standing members of the department led to a general restructuring of the remaining staff. Dr. Marinković was among those who were to leave. This precipitated a personal crisis for him. His wife had developed an incurable disease, and he had little hope of finding a similar job. On the Christmas holiday weekend, he went to his lab and acquired a bottle of sodium azide, a poisonous substance used to keep mold from growing in solutions. Later at home, on Christmas Eve, he drank it, hoping to end his life. Sodium azide is not a strong poison, but no one in the local emergency clinics had any experience with diagnosis or treatment of a toxic dose. Since it was a holiday, no senior physicians were in attendance, and Dobrivoje Marinković died. He left a bedridden wife and a twelve-year-old daughter, Tamara in a suburban house without adequate transportation to school and grocery stores. Several of the women in the department organized a group to help the family. Volunteers took turns driving young Tamara to her music lessons and ballet classes, and seeing that the grocery shopping was done and meals prepared. Tamara's grandmother then came from Belgrade to help out. Eventually Tamara was old enough to get a driver's licence of her own. She went to school by car, and she was the only pupil who was allowed to leave at lunch time to go home to care for her mother. Mrs. Marinković died in 1994 leaving Tamara on her own entirely. Last year I traveled to Dallas for a meeting and was delighted to find Tamara again. By now she has become a wonderful young woman, a distinctly beautiful one at that, with a law degree earned in Dallas, and a master's degree obtained in London. She now works in a law firm in Dallas.

Arrival in Chicago. Marinković had had bad luck, but things did not look so bright in my own life either. Black clouds gathered over Yugoslavia. A civil war was brewing, although at the time I did not properly appreciate the danger. My wife and I managed to leave Tuzla at the very last moment, just a week before the war began in May of 1992. Fortunately, our younger son, Boris, was in the United States visiting his brother, so both of our boys were safe. In 1994, Petar, who is an American citizen turned 22 and procured an immigration visa for me and my wife.

When we arrived in Chicago we were immediately taken back under the protective wing of Professor Erdős and his friends and colleagues. The professor helped me to find a job in research science. He also helped me financially until I could get back on my feet. Not only did he provide a basic support system but also the moral support that I so much needed at that point. He and his wife invited us to several of Chicago's nicest restaurants - a luxury that we had long abandoned during the days of war. Although our family was safe now, it would be a long time before we could relax and feel comfortable. I have spent a lot of time thinking of our lives both at home in Yugoslavia and here in the United States. An offer of help at the most difficult time of your life, when you have lost your bearings, when you feel of no use to anyone, and when simply living has become a burden, is especially precious. I speak from the heart when I say that even the smallest help in such a situation will be remembered forever. Dr. Erdős did not close his eyes to my family's troubles - he is not only a great scientist but an extraordinary man.

Acknowledgments

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¹ *Ante Pavelić is from Lika, now Croatia, by origin. His grandfather and Nikola Tesla's father were neighbors. Although they were not of the same ethnic background, they had very good relations. Shortly before World War II Ante joined the diplomatic service in America, and he often visited his former neighbor, Nikola. When I asked him how he had managed to continue to speak our language so well after so many years, he told me how Tesla helped him in that respect: „one morning Tesla found out that he had forgotten the Serbo-Croatian word for ‘elbow’, and then he said to himself: Nikola, you are forgetting your mother tongue. For that reason he made up his mind to read aloud something from our book, newspaper, folk song or story, for fifteen minutes every day. When I first met Tesla, he drew my attention to his problem and to its resolution. And so, all times I read something aloud on a daily basis, and I have subscribed to 5-6 magazines and papers from Yugoslavia.*